

SEQUENCE LISTING

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<120> ANTI-CD74 IMMUNOCONJUGATES AND METHODS

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<151> 2002-12-09

<150> 09/965,796

<151> 2001-10-01

<150> 09/307,816

<151> 1999-05-10

<150> 10/350,096

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<150> 09/590,284

<151> 2000-06-09

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<150> 60/478,830

<151> 2003-06-17

<160> 21

<170> PatentIn Ver. 3.2

<210> 1

<211> 360

<212> DNA

<213> Mus musculus

<220>

<221> CDS

<222> (1) .. (360)

<400> 1

cag atc cag ttg gtg cag tct gga cct gag ctg aag aag cct gga gag 48
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
1 5 10 15

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aca gtc aag gtc acc tgc aag act tct gga tat acc ttc aca aac tat 96
Thr Val Lys Val Thr Cys Lys Thr Ser Gly Tyr Thr Phe Thr Asn Tyr
      20                      25                      30

gga gtg aac tgg ata aag cag act cca gga gag ggt tta cag tgg atg 144
Gly Val Asn Trp Ile Lys Gln Thr Pro Gly Glu Gly Leu Gln Trp Met
      35                      40                      45

ggc tgg ata aac ccc aac act gga gag cca aca ttt gat gat gac ttc 192
Gly Trp Ile Asn Pro Asn Thr Gly Glu Pro Thr Phe Asp Asp Asp Phe
      50                      55                      60

aag gga cga ttt gcc ttc tct ttg gaa tcc tct gcc agc act gcc ttt 240
Lys Gly Arg Phe Ala Phe Ser Leu Glu Ser Ser Ala Ser Thr Ala Phe
      65                      70                      75                      80

ttg cag atc agc aac ctc aaa aat gag gac atg ggt aca tat ttc tgt 288
Leu Gln Ile Ser Asn Leu Lys Asn Glu Asp Met Gly Thr Tyr Phe Cys
      85                      90                      95

tca aga tcg agg ggt aaa aac gaa gcc tgg ttt gct tat tgg ggc caa 336
Ser Arg Ser Arg Gly Lys Asn Glu Ala Trp Phe Ala Tyr Trp Gly Gln
      100                      105                      110

ggg act ctg gtc act gtc tct gaa 360
Gly Thr Leu Val Thr Val Ser Glu
      115                      120

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<210> 2
<211> 120
<212> PRT
<213> Mus musculus

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<400> 2
Gln Ile Gln Leu Val Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
 1                      5                      10                      15

Thr Val Lys Val Thr Cys Lys Thr Ser Gly Tyr Thr Phe Thr Asn Tyr
      20                      25                      30

Gly Val Asn Trp Ile Lys Gln Thr Pro Gly Glu Gly Leu Gln Trp Met
      35                      40                      45

Gly Trp Ile Asn Pro Asn Thr Gly Glu Pro Thr Phe Asp Asp Asp Phe
      50                      55                      60

Lys Gly Arg Phe Ala Phe Ser Leu Glu Ser Ser Ala Ser Thr Ala Phe
      65                      70                      75                      80

Leu Gln Ile Ser Asn Leu Lys Asn Glu Asp Met Gly Thr Tyr Phe Cys
      85                      90                      95

Ser Arg Ser Arg Gly Lys Asn Glu Ala Trp Phe Ala Tyr Trp Gly Gln
      100                      105                      110

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Gly Thr Leu Val Thr Val Ser Glu
 115 120

<210> 3
 <211> 337
 <212> DNA
 <213> Mus musculus

<220>
 <221> CDS
 <222> (1)..(333)

<400> 3
 gat gtt gtg atg acc caa act cca ctc tcc ctg cct gtc agt ctt gga 48
 Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
 1 5 10 15
 gat caa gcc tcc atc tct tgc aga tct agt cag agc ctt gta cac aga 96
 Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Arg
 20 25 30
 aat gga aac acc tat tta cat tgg tac ctg cag aag cca ggc cag tct 144
 Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35 40 45
 cca aag ctc ctg atc tac aca gtt tcc aac cga ttt tct ggg gtc cca 192
 Pro Lys Leu Leu Ile Tyr Thr Val Ser Asn Arg Phe Ser Gly Val Pro
 50 55 60
 gac agg ttc agt ggc agt gga tca ggg aca gat ttc aca ctc aag atc 240
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80
 agt aga gtg gag gct gag gat ctg gga ctt tat ttc tgc tct caa agt 288
 Ser Arg Val Glu Ala Glu Asp Leu Gly Leu Tyr Phe Cys Ser Gln Ser
 85 90 95
 tca cat gtt cct ccc acg ttc ggt gct ggg acc aag ctg gag atc taac 337
 Ser His Val Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile
 100 105 110

<210> 4
 <211> 111
 <212> PRT
 <213> Mus musculus

<400> 4
 Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
 1 5 10 15
 Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Arg
 20 25 30

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Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
    35                      40                      45

Pro Lys Leu Leu Ile Tyr Thr Val Ser Asn Arg Phe Ser Gly Val Pro
    50                      55                      60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
    65                      70                      75                      80

Ser Arg Val Glu Ala Glu Asp Leu Gly Leu Tyr Phe Cys Ser Gln Ser
                      85                      90                      95

Ser His Val Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile
    100                      105                      110

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<210> 5

<211> 360

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: chimeric cLL1VH sequence

<220>

<221> CDS

<222> (1)..(360)

<400> 5

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cag gtc caa ctg cag cag tct gga cct gag ctg aag aag cct gga gag      48
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
    1                      5                      10                      15

aca gtc aag gtc acc tgc aag act tct gga tat acc ttc aca aac tat      96
Thr Val Lys Val Thr Cys Lys Thr Ser Gly Tyr Thr Phe Thr Asn Tyr
                      20                      25                      30

gga gtg aac tgg ata aag cag act cca gga gag ggt tta cag tgg atg      144
Gly Val Asn Trp Ile Lys Gln Thr Pro Gly Glu Gly Leu Gln Trp Met
                      35                      40                      45

ggc tgg ata aac ccc aac act gga gag cca aca ttt gat gat gac ttc      192
Gly Trp Ile Asn Pro Asn Thr Gly Glu Pro Thr Phe Asp Asp Asp Phe
    50                      55                      60

aag gga cga ttt gcc ttc tct ttg gaa tcc tct gcc agc act gcc ttt      240
Lys Gly Arg Phe Ala Phe Ser Leu Glu Ser Ser Ala Ser Thr Ala Phe
    65                      70                      75                      80

ttg cag atc agc aac ctc aaa aat gag gac atg ggt aca tat ttc tgt      288
Leu Gln Ile Ser Asn Leu Lys Asn Glu Asp Met Gly Thr Tyr Phe Cys
                      85                      90                      95

tca aga tcg agg ggt aaa aac gaa gcc tgg ttt gct tat tgg ggc caa      336
Ser Arg Ser Arg Gly Lys Asn Glu Ala Trp Phe Ala Tyr Trp Gly Gln
    100                      105                      110

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ggg act ctg gtc acc gtc tcc tca
 Gly Thr Leu Val Thr Val Ser Ser
 115 120

360

<210> 6
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: chimeric cLL1VH sequence

<400> 6
 Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Lys Lys Pro Gly Glu
 1 5 10 15
 Thr Val Lys Val Thr Cys Lys Thr Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 Gly Val Asn Trp Ile Lys Gln Thr Pro Gly Glu Gly Leu Gln Trp Met
 35 40 45
 Gly Trp Ile Asn Pro Asn Thr Gly Glu Pro Thr Phe Asp Asp Asp Phe
 50 55 60
 Lys Gly Arg Phe Ala Phe Ser Leu Glu Ser Ser Ala Ser Thr Ala Phe
 65 70 75 80
 Leu Gln Ile Ser Asn Leu Lys Asn Glu Asp Met Gly Thr Tyr Phe Cys
 85 90 95
 Ser Arg Ser Arg Gly Lys Asn Glu Ala Trp Phe Ala Tyr Trp Gly Gln
 100 105 110
 Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 7
 <211> 339
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: chimeric cLL1Vk sequence

<220>
 <221> CDS
 <222> (1)..(339)

<400> 7
 gac atc cag ctg acc caa act cca ctc tcc ctg cct gtc agt ctt gga 48
 Asp Ile Gln Leu Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
 1 5 10 15

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gat caa gcc tcc atc tct tgc aga tct agt cag agc ctt gta cac aga 96
Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Arg
                20                25                30

aat gga aac acc tat tta cat tgg tac ctg cag aag cca ggc cag tct 144
Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
                35                40                45

cca aag ctc ctg atc tac aca gtt tcc aac cga ttt tct ggg gtc cca 192
Pro Lys Leu Leu Ile Tyr Thr Val Ser Asn Arg Phe Ser Gly Val Pro
                50                55                60

gac agg ttc agt ggc agt gga tca ggg aca gat ttc aca ctc aag atc 240
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
                65                70                75                80

agt aga gtg gag gct gag gat ctg gga ctt tat ttc tgc tct caa agt 288
Ser Arg Val Glu Ala Glu Asp Leu Gly Leu Tyr Phe Cys Ser Gln Ser
                85                90                95

tca cat gtt cct ccc acg ttc ggt gct ggg acc aag ctg gag atc aaa 336
Ser His Val Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys
                100                105                110

cgt
Arg
339

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<210> 8

<211> 113

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: chimeric cLL1Vκ sequence

<400> 8

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Asp Ile Gln Leu Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
 1                5                10                15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Arg
 20                25                30

Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser
 35                40                45

Pro Lys Leu Leu Ile Tyr Thr Val Ser Asn Arg Phe Ser Gly Val Pro
 50                55                60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65                70                75                80

Ser Arg Val Glu Ala Glu Asp Leu Gly Leu Tyr Phe Cys Ser Gln Ser
 85                90                95

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Ser His Val Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys
 100 105 110

Arg

<210> 9
 <211> 360
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: humanized hLL1VH sequence

<220>
 <221> CDS
 <222> (1)..(360)

<400> 9
 cag gtc caa ctg cag caa tct ggg tct gag ttg aag aag cct ggg gcc 48
 Gln Val Gln Leu Gln Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
 1 5 10 15
 tca gtg aag gtt tcc tgc aag gct tct gga tac acc ttc act aac tat 96
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30
 gga gtg aac tgg ata aag cag gcc cct gga caa ggg ctt cag tgg atg 144
 Gly Val Asn Trp Ile Lys Gln Ala Pro Gly Gln Gly Leu Gln Trp Met
 35 40 45
 ggc tgg ata aac ccc aac act gga gag cca aca ttt gat gat gac ttc 192
 Gly Trp Ile Asn Pro Asn Thr Gly Glu Pro Thr Phe Asp Asp Asp Phe
 50 55 60
 aag gga cga ttt gcc ttc tcc ttg gac acc tct gtc agc acg gca tat 240
 Lys Gly Arg Phe Ala Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
 65 70 75 80
 ctc cag atc agc agc cta aag gct gac gac act gcc gtg tat ttc tgt 288
 Leu Gln Ile Ser Ser Leu Lys Ala Asp Asp Thr Ala Val Tyr Phe Cys
 85 90 95
 tca aga tcg agg ggt aaa aac gaa gcc tgg ttt gct tat tgg ggc caa 336
 Ser Arg Ser Arg Gly Lys Asn Glu Ala Trp Phe Ala Tyr Trp Gly Gln
 100 105 110
 ggg acc ctg gtc acc gtc tcc tca 360
 Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 10
 <211> 120
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: humanized hLL1VH sequence

<400> 10

Gln Val Gln Leu Gln Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
 20 25 30

Gly Val Asn Trp Ile Lys Gln Ala Pro Gly Gln Gly Leu Gln Trp Met
 35 40 45

Gly Trp Ile Asn Pro Asn Thr Gly Glu Pro Thr Phe Asp Asp Asp Phe
 50 55 60

Lys Gly Arg Phe Ala Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
 65 70 75 80

Leu Gln Ile Ser Ser Leu Lys Ala Asp Asp Thr Ala Val Tyr Phe Cys
 85 90 95

Ser Arg Ser Arg Gly Lys Asn Glu Ala Trp Phe Ala Tyr Trp Gly Gln
 100 105 110

Gly Thr Leu Val Thr Val Ser Ser
 115 120

<210> 11

<211> 339

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: humanized hLL1Vk sequence

<220>

<221> CDS

<222> (1)..(339)

<400> 11

gac atc cag ctg act cag tct cca ctc tcc ctg ccc gtc acc ctt gga 48
 Asp Ile Gln Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1 5 10 15

cag ccg gcc tcc atc tcc tgc aga tca agt cag agc ctt gta cac aga 96
 Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Arg
 20 25 30

aat gga aac acc tat tta cat tgg ttt cag cag agg cca ggc caa tct 144
 Asn Gly Asn Thr Tyr Leu His Trp Phe Gln Gln Arg Pro Gly Gln Ser
 35 40 45


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cca agg ctc ctg atc tac aca gtt tcc aac cga ttt tct ggg gtc cca 192
Pro Arg Leu Leu Ile Tyr Thr Val Ser Asn Arg Phe Ser Gly Val Pro
    50                      55                      60

gac aga ttc agc ggc agt ggg tca ggc act gat ttc aca ctg aaa atc 240
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
    65                      70                      75                      80

agc agg gtg gag gct gag gat gtt ggg gtt tat ttc tgc tct caa agt 288
Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Ser Gln Ser
                      85                      90                      95

tca cat gtt cct ccc acg ttc ggt gct ggg aca cga ctg gag atc aaa 336
Ser His Val Pro Pro Thr Phe Gly Ala Gly Thr Arg Leu Glu Ile Lys
          100                      105                      110

cgt 339
Arg

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<210> 12
<211> 113
<212> PRT
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: humanized hLL1Vk sequence

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<400> 12
Asp Ile Gln Leu Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1              5              10              15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Arg
          20              25              30

Asn Gly Asn Thr Tyr Leu His Trp Phe Gln Gln Arg Pro Gly Gln Ser
          35              40              45

Pro Arg Leu Leu Ile Tyr Thr Val Ser Asn Arg Phe Ser Gly Val Pro
          50              55              60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65              70              75              80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Phe Cys Ser Gln Ser
          85              90              95

Ser His Val Pro Pro Thr Phe Gly Ala Gly Thr Arg Leu Glu Ile Lys
          100              105              110

Arg

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<210> 13
<211> 109
<212> PRT
<213> Homo sapiens

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<400> 13

Gln Val Gln Leu Val Gln Ser Gly Ser Glu Leu Lys Lys Pro Gly Ala
 1 5 10 15
 Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr
 20 25 30
 Ala Met Asn Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met
 35 40 45
 Gly Trp Ile Asn Thr Asn Thr Gly Asn Pro Thr Tyr Ala Gln Gly Phe
 50 55 60
 Thr Gly Arg Phe Val Phe Ser Leu Asp Thr Ser Val Ser Thr Ala Tyr
 65 70 75 80
 Leu Gln Ile Ser Ser Leu Lys Ala Asp Asp Thr Ala Val Tyr Tyr Cys
 85 90 95
 Ala Arg Glu Asp Ser Asn Gly Tyr Lys Ile Phe Asp Tyr
 100 105

<210> 14

<211> 11

<212> PRT

<213> Homo sapiens

<400> 14

Trp Gly Gln Gly Ser Leu Val Thr Val Ser Ser
 1 5 10

<210> 15

<211> 111

<212> PRT

<213> Homo sapiens

<400> 15

Asp Val Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly
 1 5 10 15
 Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser
 20 25 30
 Asp Gly Asn Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser
 35 40 45
 Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp Ser Gly Val Pro
 50 55 60
 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
 65 70 75 80
 Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Gly
 85 90 95

Thr His Trp Pro Phe Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile
 100 105 110

<210> 16
 <211> 16
 <212> PRT
 <213> Mus musculus

<400> 16
 Arg Ser Ser Gln Ser Leu Val His Arg Asn Gly Asn Thr Tyr Leu His
 1 5 10 15

<210> 17
 <211> 7
 <212> PRT
 <213> Mus musculus

<400> 17
 Thr Val Ser Asn Arg Phe Ser
 1 5

<210> 18
 <211> 9
 <212> PRT
 <213> Mus musculus

<400> 18
 Ser Gln Ser Ser His Val Pro Pro Thr
 1 5

<210> 19
 <211> 5
 <212> PRT
 <213> Mus musculus

<400> 19
 Asn Tyr Gly Val Asn
 1 5

<210> 20
 <211> 17
 <212> PRT
 <213> Mus musculus

<400> 20
 Trp Ile Asn Pro Asn Thr Gly Glu Pro Thr Phe Asp Asp Asp Phe Lys
 1 5 10 15

Gly

<210> 21

<211> 11

<212> PRT

<213> Mus musculus

<400> 21

Ser Arg Gly Lys Asn Glu Ala Trp Phe Ala Tyr
1 5 10